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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,137	12/31/2003	Ching-Huang Lin	DEE-PT144	9790

3624 7590 09/27/2005

VOLPE AND KOENIG, P.C.  
UNITED PLAZA, SUITE 1600  
30 SOUTH 17TH STREET  
PHILADELPHIA, PA 19103

EXAMINER
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WARD, JOHN A

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 09/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/750,137

Applicant(s)

LIN ET AL.

Examiner

John A. Ward

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Priority*

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 4-8 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Suzuki et al (US 6,536,932).

Regarding claim 1, Suzuki et al ('932) discloses a spread illuminating apparatus having a light guide plate 8 having a side, a first luminary 6, second luminary 7, disposed on each end of a light guide stick 5, the light guide stick as shown in figure 1 having a light guide concave section 16a, and column 4, lines 26-35 teaches that the first and second luminary is used for guiding light toward the light guide plate.

Regarding claim 2, Suzuki et al shows that one end of the light guide is thicker than the other end.

Regarding claim 4, Suzuki et al teaches that the first and second luminaries are light emitting diodes (column 4, line 1).

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Regarding claim 5, Suzuki et al shows in figure 1 that the light guide concave section 16a, in the light guide stick is an incline.

Regarding claims 6 and 10, Suzuki et al shows a reflecting layer 15.

Regarding claim 7, Suzuki et al shows how the light guide concave section is symmetrical between the first and second luminaries in figure 1.

Regarding claim 8, Suzuki et al teaches that the first and second luminaries can be of different types (column 7, lines 5-9).

Claims 11-12, 14-16 and 20-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Suzuki et al (US 6,536,932).

Regarding claim 11, Suzuki et al ('932) discloses a spread illuminating apparatus having a light guide plate 8 having a side, a first luminary 6, second luminary 7, disposed on each end of a light guide stick 5, the light guide stick as shown in figure 1 having a light guide concave sections 16a, and column 4, lines 26-35 teaches that the first and second luminary is used for guiding light toward the light guide plate.

Regarding claim 12, Suzuki et al shows that one end of the light guide is thicker than the other end.

Regarding claim 14, Suzuki et al teaches that the first and second luminaries are light emitting diodes (column 4, line 1).

Regarding claim 15, Suzuki et al shows in figure 1 that the light guide concave 16a, in the light guide stick is an incline.

Regarding claim 16, Suzuki et al shows a reflecting layer 15.

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Regarding claim 20, Suzuki et al shows how the light guide concave is symmetrical between the first and second luminaries in figure 1.

Regarding claim 21, Suzuki et al teaches that the first and second luminaries can be of different types (column 7, lines 5-9).

Claims 1, 4, 11 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Maeda et al (US 6,883,924).

Regarding claims 1 and 11, Maeda et al ('924) discloses a lighting apparatus and liquid crystal display having a light guide plate 16 having sides, a light guide stick 14, a first luminary 12a, a second luminary 12b, and Maeda et al teaches in the abstract that the light guide stick directs light towards the light guide plate.

Regarding claims 4 and 14 that the first luminary and second luminary are light emitting diodes (column 6, line 10).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al as applied to claim 1 above, and further in view of Kohara et al (US 6,633,722).

Regarding claims 3 and 9, Suzuki et al discloses all the limitations of the claimed invention as cited in claim 1 above, but does not disclose a plurality of diffusing spots or the light guide concave is asymmetric.

Regarding claim 9, it would obvious to one having ordinary skill in the art at the time the invention was made make the light guide concave asymmetric with respect to the first and second luminaries, since applicant has not disclosed that creating the light guide concave asymmetric solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well using symmetric concave light guide.

Regarding claim 3, Kohara et al ('722) discloses a light guide plate having a light guide plate 2, a light source 4 located at the end of the light guide plate, a plurality of V-cut notch structure 22 located at the bottom of the light guide plate.

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the light guide of Suzuki et al with light guide of Kohara et al having v-cut notch structure in order to provide a uniform illumination along the length of the light guide.

Claims 13 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al as applied to claim 11 above, and further in view of Kohara et al (US 6,633,722).

Regarding claims 13, Suzuki et al discloses all the limitations of the claimed invention as cited in claim 11 above, but does not disclose a plurality of diffusing spots or the light guide concave is asymmetric.

Regarding claim 22, it would be obvious to one having ordinary skill in the art at the time the invention was made to make the light guide concave asymmetric with respect to the first and second luminaries, since applicant has not disclosed that creating the light guide concave asymmetric solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well using symmetric concave light guide.

Regarding claim 13, Kohara et al ('722) discloses a light guide plate having a light guide plate 2, a light source 4 located at the end of the light guide plate, a plurality of V-cut notch structure 22 located at the bottom of the light guide plate.

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the light guide of Suzuki et al with light guide of

Kohara et al having v cut notch structure in order to provide a uniform illumination along the length of the light guide.

Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al.

Regarding claims 17-19 Suzuki et al discloses all the limitations of the claimed invention as cited in claim 11 above, but does not disclose a plurality of refractive coating on the cavity.

Regarding claim 17-19, it would obvious to one having ordinary skill in the art at the time the invention was made make the cavity with a refractive, since applicant has not disclosed that creating the light guide concave asymmetric solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well using a reflective coating.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John A. Ward whose telephone number is 571-272-2386. The examiner can normally be reached on Monday - Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 571-272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JAW  
September 22, 2005



**JOHN ANTHONY WARD**  
**PRIMARY EXAMINER**